

## DIRECTIONAL MICROPHONE

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### Abstract of JP3101399

**PURPOSE:** To constitute a secondary gradient microphone by arranging a sensor unit opposite to an acoustic reflection face, so that acoustic mutual action between the sensor unit and the acoustic reflection face provides an output of the sensor unit with a pattern corresponding to a secondary gradient. **CONSTITUTION:** A directional microphone device 11 has the single first-order gradient (FOG) sensor 13, which is fixed on an aperture 14 formed on the center of a baffle 12. The sensor 13 and the baffle 12 are separated from the acoustic reflection face 15 by a prescribed distance  $z_0$ , and a face regulated by the sensor 13 and the baffle 12 is in parallel with the reflection face 15. The bi-directional axis of the sensor 13 is orthogonal to the reflection face 15, and the prescribed distance  $z_0$  from the face 15 is a function of the maximum frequency. An output from the sensor is the sum of its own output, and an output from a virtual image and the obtained sensor output has a secondary gradient characteristic. Consequently, the secondary gradient microphone can be formed.

